



FCS Simulation Support Strategy

**Presentation to Army M&S Executive
Council**

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FCS

M&S



Experimentation to Gain Insights



Contractor Proposal Evaluation



FCS Analysis



FCS Test & Evaluation



Training



FCS Simulation Support Strategy

Leverage simulation events to support multiple applications

Enable feedback loop between contractor insights and requirements trades (ORD refinement)

Enable training simulation development as by-product of system development (embedded, individual, crew, collective, maintenance)

Enable on-board decision aides, COA analysis tools as by-product of system simulation (terrain visualization, scenario generation, simulation GUIs)

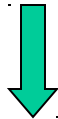
Enable simulation augmented DT & OT

Enable “on the fly” TOC analysis with system design changes via linked cost models and Computer Assisted Systems Engineering tools



Future Combat
Collaborative Environment

PMO FCS



PMO FCS

FCS Integrated Data Environment (IDE) &
Distributed Product Description



Design, Engineering, Manufacturing
Collaborative Environment

Contractor Team



PMO FCS

Future Combat Collaborative Environment

Components:

M&S Tool Set (i.e. CASTFOREM, JANUS, ACEIT, JCATS, MODSAF, etc)

SME Support (i.e. TRAC, AMSAA, SLAD, CEAC, ATEC, etc)

STANDARDS (i.e. DIS, HLA, SEDRIS, XML, STEP, etc)

Processes (i.e. VV&A, user rights, configuration management, etc)

Scenarios & Threat (government developed & furnished)



Contractor Team

Design, Engineering, Manufacturing
Collaborative Environment

**Tool Set, SMEs, Internal Standards, Internal Processes at
discretion of Contractor Team**

**Encourage use of Government Furnished M&S (i.e. Acquire,
JCATS, OTB, NRMM)**

**Contractor Develops Distributed Product Description with
coherency of information (i.e. semantics, syntax, resolution,
integrity among independent attributes)**



O&O Concept Collaboration

Ensure impact of this thinking...

...is imbedded in this design work

Force O&O Concept Refinement

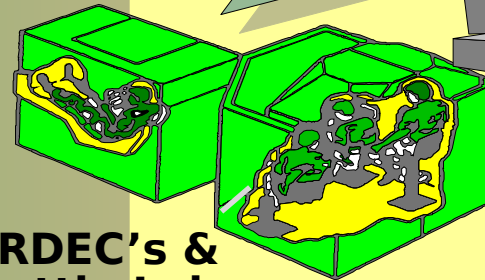
System Concept Development

Army Futures

**Army Strategy Studies
PMJ Modeling & Gaming**



O&O Framework



RDEC's & Battle Labs

Industry Teams



Gov't Neckdown Evaluations



OA M&S Prep

Gov't User Rep

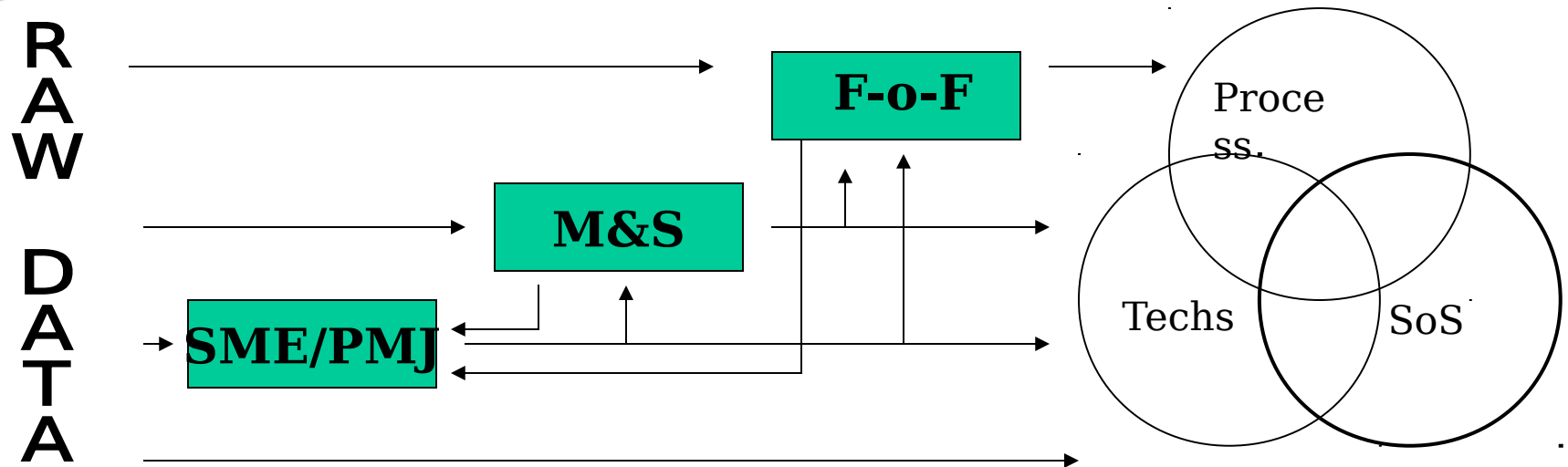


...is reflected in final O&O and ORD

Ensure impact of contractor insights...



FCS Evaluation Process:



Best (Process + Technology + System of Systems Concept) =
Most Likely to Achieve FCS Desired Mission Outcome

M&S = Contributes to Technology/SoS/Process
Assessment



FCS M&S Issues

Top Priority Tool Funding:

C4ISR

Supportability

Total Ownership Cost Analysis

Issues requiring resolution as program matures:

Definition & Ownership of DPD

GFE tools, scenarios, terrain databases, threat re

Instrumentation of ranges to support test and tra

Simulation augmented Operational test

FCS Representation in legacy training simulation

Other...



FCS M&S Way Ahead

CASTFOREM & Janus runs executing w/ contractor developed vignettes and surrogated data

Beginning simulation runs with contractor supplied, AMSAA certified data data

Developing FCS M&S Architecture - meet needs of FCS & map to TF Tiger Team Operational Architecture

Looking to Leverage JVB where appropriate and relevant

Looking to Leverage RDEC Federation where appropriate and relevant

Leveraging FCC2 CEP to conduct distributed network exploratory analysis and experimentation

Coordinating with TRADOC to establish process for simulation